WHAT IS CLAIMED IS:

1. An ultrasonic diagnostic imaging system for producing a blended harmonic ultrasonic image of tissue inside a body, comprising:

means for transmitting ultrasonic energy into the body at a fundamental frequency;

means, responsive to said transmitted ultrasonic energy, for receiving ultrasonic echo signals from tissue at a plurality of depths in the body;

means for separating said echo signals into fundamental and harmonic frequency components; and

an image processor which produces image signals which are a blend of proportions of said fundamental and harmonic frequency components, said proportions varying with echo signal depth.

2. The ultrasonic diagnostic imaging system of Claim 1, wherein said image processor comprises means for producing image signals of predominately harmonic frequency components in the near field of an image, and image signals of predominately fundamental frequency components in the far field of an image.

3. The ultrasonic diagnostic imaging system of Claim 2, wherein said image processor further comprises means for producing image signals of both harmonic and fundamental frequency components in the intermediate field between said near and far fields.

4. The ultrasonic diagnostic imaging system of Claim 1, wherein said separating means includes a filter for producing fundamental frequency echo signal components to the at least partial exclusion of harmonic frequency components, and for producing

harmonic frequency echo signal components to the at least partial exclusion of fundamental frequency components.

5. The ultrasonic diagnostic imaging system of Claim 4, wherein said transmitting means comprises means for transmitting two differently phased pulses of ultrasonic energy to a common region of the body, and wherein said filter combines ultrasonic echoes from said two transmitted waves to produce at least one of said fundamental and harmonic frequency echo components.

6. The ultrasonic diagnostic imaging system of Claim 1, wherein said image processor comprises means for producing a fundamental image from said fundamental frequency components and a harmonic image from said harmonic frequency components,

wherein said image processor produces a blended image which is a combination of image signals from said fundamental and harmonic images.

7. An ultrasonic diagnostic imaging system for producing a blended harmonic ultrasonic image of tissue inside a body, comprising:

a transducer for receiving ultrasonic echoes from tissue in an image area of the body, said ultrasonic echoes containing fundamental and harmonic frequency components; and

an image processor, responsive to said ultrasonic echoes, for producing an image of said image area which is a variable blend of fundamental and harmonic frequency information.

8. The ultrasonic diagnostic imaging system of Claim 7, wherein said image contains a first image area region formed principally from harmonic frequency components and a second image area region formed principally from fundamental frequency components.

9. The ultrasonic diagnostic imaging system of Claim 8, wherein said first image area is in the near field of said image and said second image area is in the far field of said image.

10. The ultrasonic diagnostic imaging system of Claim 9, further comprising a third image area formed from a blend of both fundamental and harmonic frequency components.

11. The ultrasonic diagnostic imaging system of Claim 7, wherein said blend is a function of the depth from which said ultrasonic echoes are received.

12. The ultrasonic diagnostic imaging system of Claim 7, wherein said blend is a function of the location in said image area from which said ultrasonic echoes are received.

13. A method for producing an ultrasonic image which is a blend of fundamental and harmonic frequency echo information comprising the steps of:

receiving ultrasonic echoes from tissue of the body which contain both fundamental and harmonic frequency components;

separately detecting said fundamental and harmonic frequency components of said ultrasonic echoes;

forming signals which are a blend of said detected fundamental and harmonic frequency components prior to image formation;

storing said signals in a blended image memory; and

displaying an image from the signals stored in said blended image memory.

14. The method of Claim 13, wherein said blend of fundamental and harmonic frequency components varies as a function of time.

15. The method of Claim 13, wherein said blend of fundamental and harmonic frequency components varies as a function of depth.

16. The method of Claim 13, wherein said blend of fundamental and harmonic frequency components varies as a function of the location of said tissue.

17. An ultrasonic diagnostic imaging system for producing a blended harmonic ultrasonic image of tissue inside a body, comprising:

a transducer for receiving ultrasonic echoes from tissue in an image area of the body, said ultrasonic echoes containing fundamental and harmonic frequency components;

a time varying filter, responsive to said received ultrasonic echoes, for producing signals containing different proportions of fundamental and harmonic frequency echo components at different times; and

an image processor, responsive to said signals produced by said time varying filter, for producing an image which is a blend of fundamental and harmonic frequency information.

18. The ultrasonic diagnostic imaging system of Claim 17, wherein said time varying filter exhibits a passband which varies from high to low frequencies over time.

19. The ultrasonic diagnostic imaging system of Claim 18, wherein said time varying filter produces signals containing a relatively high proportion of harmonic frequency components from echoes received at shallow depths, and a relatively high proportion of fundamental frequency components from echoes received at deeper depths.

20. The ultrasonic diagnostic imaging system of Claim 17, wherein said time varying filter comprises a digital filter.

21. The ultrasonic diagnostic imaging system of Claim 20, wherein the passband of said digital time varying filter is changed by changing the filter coefficients with time.

22. An ultrasonic diagnostic imaging system for producing a harmonic ultrasonic image of tissue inside a body, comprising:

a transducer for receiving ultrasonic echoes from tissue in an image area of the body, said ultrasonic echoes containing fundamental and harmonic frequency components;

a processing channel, and responsive to said received ultrasonic echoes, which alternately produces fundamental and harmonic frequency signals in a time interleaved fashion; and

an image processor, responsive to said time interleaved signals, which produces an ultrasonic image

containing both fundamental and harmonic frequency signal information.

23. The ultrasonic diagnostic imaging system of Claim 22, wherein said processing channel further comprises a digital filter.

24. The ultrasonic diagnostic imaging system of Claim 23, wherein said digital filter alternately exhibits two different passbands.

25. The ultrasonic diagnostic imaging system of Claim 24, wherein said digital filter alternately exhibits a high frequency passband which produces harmonic frequency signal components, and a low frequency passband which produces fundamental frequency signal components.

26. A method for producing an ultrasonic image which is a blend of fundamental and harmonic frequency echo information comprising the steps of:

receiving from a range of depths a sequence of ultrasonic echoes from tissue of the body which contain both fundamental and harmonic frequency components;

separating said fundamental and harmonic frequency components of said ultrasonic echoes;

forming signals corresponding to said range of depths which are a varying composition of said fundamental and harmonic frequency components; and

displaying an image produced from said signals.

27. The method of Claim 26, wherein said step of forming forms signals primarily composed of harmonic frequency information at a shallow depth, and forms signals primarily composed of fundamental frequency information at a deeper depth.